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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,175	04/02/2001	Kazuhiko Yanagawa	HITA.0045	7332

7590 06/05/2002

Stanley P. Fisher
Reed Smith Hazel & Thomas LLP
3110 Fairview Park Drive, Suite 1400
Falls Church, VA 22042-4503

EXAMINER
RUDE, TIMOTHY L

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/822,175	YANAGAWA ET AL.	
	Examiner	Art Unit	
	Timothy L Rude	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

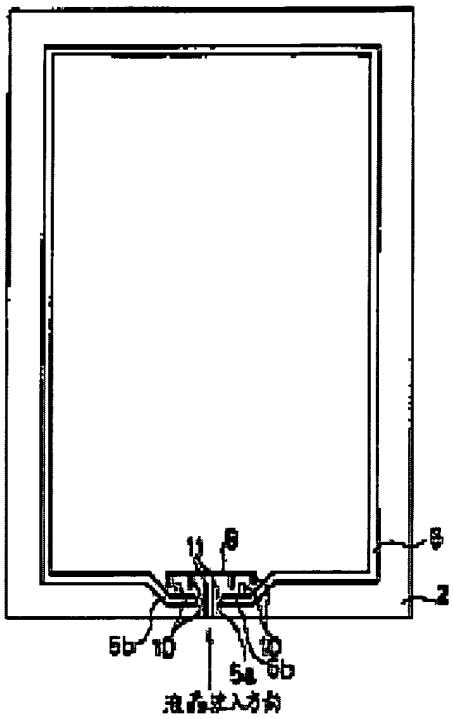
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

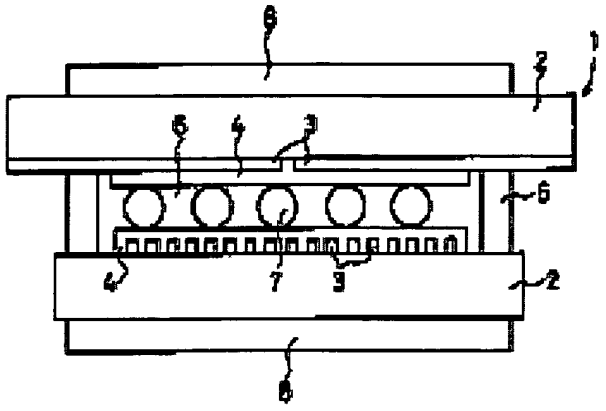
1. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Misono et al (Misono) Japanese Patent Abstract Publication 06-034984.

As to claim 1, Misono discloses in Drawings 1 and 2 a liquid crystal display device comprising a pair of substrates, 2, as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween (Abstract) and a seal material, 5, used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material, wherein: more than one spacer filled [0017] (Applicant's projection body), 9, 10, and 11, seal material portion, is disposed within said seal material along an extending direction thereof (per Drawing 1), and this projection body is formed at either one of said respective substrates [0017].

【図1】



【図2】



As to claim 3, Misono discloses a liquid crystal display device comprising a pair of substrates as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween and a seal material, 5, used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material, wherein:

a liquid crystal encapsulation inlet port, 5a, as formed at part of this seal material is sealed by a sealing material, and said liquid crystal display device has more than one spacer filled [0017] (Applicant's projection body), 9, 10, and 11, seal material portion being formed on one substrate side on a side with liquid crystals being encapsulated at nearby part of said liquid crystal encapsulation inlet port [0017].

As to claim 4, Misono discloses a liquid crystal display device comprising a pair of substrates as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween and a seal material, 5, used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material, wherein:
a liquid crystal encapsulation inlet port, 5a, as formed at part of this seal material is sealed by a sealing material, said liquid crystal display device has a plurality of spacer filled [0017] (Applicant's projection bodies) seal material portions being formed on one substrate side on a side with liquid crystals being encapsulated at nearby part of said liquid crystal encapsulation inlet port, and these respective projection bodies are formed to extend in a liquid crystal encapsulation direction (per Drawing 1).

As to claim 5, Misono discloses a liquid crystal display device comprising a pair of substrates, 2, as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween and a seal material, 5, used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material, wherein: a liquid crystal encapsulation inlet port, 5a, as formed at part of this seal material is sealed by a UV-hardenable material [0019], said liquid crystal display device has more than one projection body being formed on one substrate side on a side with liquid crystals being encapsulated at nearby part of said liquid crystal encapsulation inlet port, and this projection body is

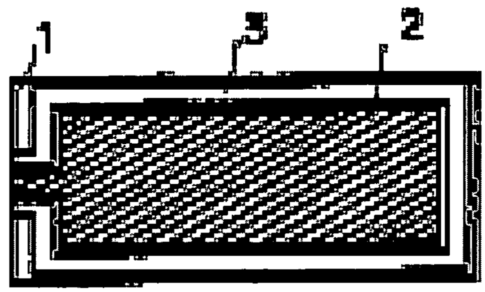
arranged to block or shield light rays (per Drawing 1) coming from the liquid crystal encapsulation inlet port while guiding a flow of liquid crystals from said liquid crystal encapsulation inlet port.

As to claim 6, Misono discloses the liquid crystal display device as recited in claim 5, wherein said projection body defines and retains a gap of the remaining substrate with respect to the one substrate [0023].

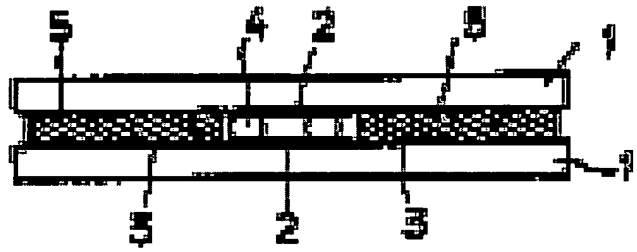
2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Obata, Japanese Patent Abstract Publication 61-162025.

As to claim 1, Obata discloses in Drawing 1 a liquid crystal display device comprising a pair of substrates, 1, as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween and a seal material, 3, used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material (Abstract), wherein: more than one spacer, 5, (Applicant's projection body) is disposed within said seal material along an extending direction thereof, and this projection body is formed at either one of said respective substrates.

1



(1)



(2)

As to claim 3, Obata discloses a liquid crystal display device comprising a pair of substrates, 1, as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween (Abstract) and a seal material used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material, wherein:

a liquid crystal encapsulation inlet port as formed at part of this seal material is sealed by a sealing material, and said liquid crystal display device has more than one projection body, 4, being formed on one substrate side on a side with liquid crystals being encapsulated at nearby part of said liquid crystal encapsulation inlet port.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

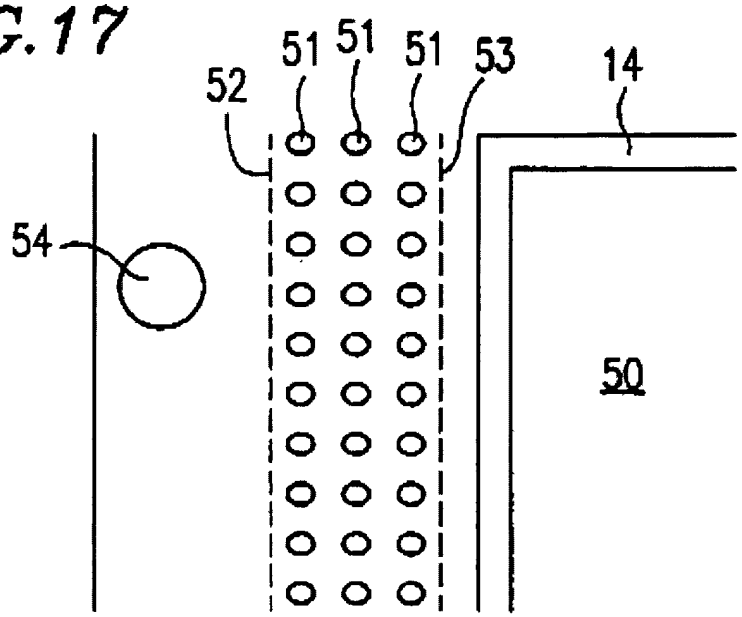
3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Misono, as applied to claim 1 above, in view of Nakahara et al (Nakahara) USPAT 6,239,855 B1.

As to claim 2, Misono discloses the liquid crystal display device as recited in claim 1.

Misono does not disclose a device wherein said projection body comprises a plurality of parallel-disposed projection bodies, it would have been obvious given Nakahara.

Nakahara teaches in Figure 17 a device comprising a plurality of parallel-disposed sealant particles, 51, (Applicant's projection bodies) to minimize stress distortion and waviness of the glass plates (col. 12, line 66 through col. 13, line 8).

FIG. 17



Nakahara is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a plurality of parallel-disposed sealant particles (Applicant's projection bodies) to minimize stress distortion and waviness of the glass plates

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Misono with the plurality of parallel-disposed sealant particles (Applicant's projection bodies) of Nakahara.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obata, as applied to claim 1 above, in view of Nakahara.

As to claim 2, Obata discloses the liquid crystal display device as recited in claim 1.

Obata does not disclose a device wherein said projection body comprises a plurality of parallel-disposed projection bodies, it would have been obvious given Nakahara.

Nakahara teaches in Figure 17 a device comprising a plurality of parallel-disposed sealant particles, 51, (Applicant's projection bodies) to minimize stress distortion and waviness of the glass plates (col. 12, line 66 through col. 13, line 8).

Nakahara is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a plurality of parallel-disposed sealant particles (Applicant's projection bodies) to minimize stress distortion and waviness of the glass plates

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Obata with the plurality of parallel-disposed sealant particles (Applicant's projection bodies) of Nakahara.

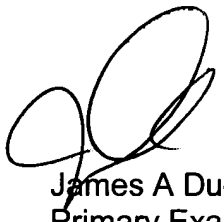
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (703) 305-0418. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

Timothy L Rude
Examiner
Art Unit 2871

TLR
May 30, 2002



James A Dudek
Primary Examiner
Art Unit 2871